April 21, 2014

Spectrum Pharmaceuticals Promotes and Appoints Joseph Turgeon as President and Chief Operating Officer

- **Joseph Turgeon has more than 30 years of experience in the biotech industry, including 22 years at Amgen; until recently was Spectrum's Chief Commercial Officer**
- **Thomas Riga promoted to Senior Vice President and Chief Commercial Officer; Tom has more than 15 years' experience in the biotech industry, which includes Amgen, Eli Lilly, and Dendreon; until recently was Spectrum's VP of Corporate Accounts**

HENDERSON, Nev.--(BUSINESS WIRE)-- Spectrum Pharmaceuticals (NasdaqGS: SPPI), a biotechnology company with fully integrated commercial and drug development operations with a primary focus in hematology and oncology, today announced the promotion of Joseph Turgeon to President and Chief Operating Officer. Mr. Turgeon was previously Senior Vice President and Chief Commercial Officer. Spectrum also announced the promotion of Thomas Riga to Senior Vice President, Chief Commercial Officer. Mr. Riga was previously Vice President, Corporate Accounts.

"We are fortunate to have an experienced, passionate, and inspiring leader like Joe Turgeon spearhead the company," said Rajesh C. Shrotriya, MD, Chairman and Chief Executive Officer of Spectrum Pharmaceuticals. "Joe was responsible for building a top sales organization and for launching four of the world's top-selling biologicals, during his over two decades at Amgen. With a rare depth of experience in the biotechnology industry, a keen understanding of our business, and very strong leadership skills, Joe is uniquely qualified for this position. He has been instrumental in helping Spectrum execute our strategy since he joined us in 2012. With multiple launches and NDAs planned in the coming years, I believe Joe's leadership is exactly what Spectrum needs to become a leader in hematology/oncology."

"I take up this new role with honor, humility, and confidence," said Joseph Turgeon, President and Chief Operating Officer. "We have an exciting year ahead of us, with several meaningful milestones. Our base business remains strong, and could be further strengthened with the potential FDA approval of Beleodaq™ later this year. The ongoing proof-of-concept study SPI-2012 has the potential to take Spectrum to the next level. I am committed to improving lives of patients, to improving prospects for our shareholders, and to bringing out the best in our team."

Joseph Turgeon joined Spectrum in October 2012 and brings over 30 years of pharmaceutical sales experience, including various executive leadership roles at Amgen. Prior to joining the Company, he spent 22 years at Amgen Inc. as Vice President, Sales, where he built and led the sales organization across multiple areas, including oncology, inflammation, and bone health. Mr. Turgeon was responsible for launching most of the drugs at Amgen. At Spectrum, he has built a world-class sales organization that has increased efficiency and visibility. He was also instrumental in the launch of Marqibo® (vinCRIStine sulfate LIPOSOME injection) last year in a record time of about 7 weeks. Mr. Turgeon holds a B.S. from Jacksonville University, where he studied microbiology and economics.

Thomas Riga brings over 15 years of pharmaceutical sales and management experience in various positions at Amgen, Eli Lilly, and Dendreon. Since joining Spectrum, Mr. Riga has been instrumental in the reorganization of the Corporate Accounts function, and in successful partnership and renegotiation with various partners. He has co-led the Commercial contracting strategy and attracted some of the industry's top talent to join Spectrum.

Ken Keller resigned as Executive Vice President, Chief Operating Officer of the company to pursue other opportunities.

"I would like to personally thank Ken for his contributions to the company," added Dr. Shrotriya. "On behalf of the team at Spectrum, I wish him the best in his future endeavors."

About Spectrum Pharmaceuticals, Inc.

Spectrum Pharmaceuticals is a leading biotechnology company focused on acquiring, developing, and commercializing drug products, with a primary focus in oncology and hematology. Spectrum and its affiliates market four oncology drugs ─ FUSILEV® (levoleucovorin) for Injection in the U.S.; FOLOTYN® (pralatrexate injection), also marketed in the U.S.; ZEVALIN® (ibritumomab tiuxetan) Injection for intravenous use, for which the Company has worldwide marketing rights; and MARQIBO® (vinCRIStine sulfate LIPOSOME injection) for intravenous infusion, for which the Company has worldwide marketing rights. Spectrum's strong track record in in-licensing and acquiring differentiated drugs and expertise in clinical development have generated a robust,

diversified, and growing pipeline of product candidates in advanced-stage Phase 2 and Phase 3 studies. More information on Spectrum is available at www.sppirx.com.

About Marqibo®

Marqibo is a novel, sphingomyelin/cholesterol liposome-encapsulated formulation of vincristine sulfate. Vincristine, a microtubule inhibitor, is FDA approved for the treatment of adult patients with Philadelphia chromosome-negative (Ph-) acute lymphoblastic leukemia (ALL) in second or greater relapse or whose disease has progressed following two or more anti-leukemia therapies. (The encapsulation technology, utilized in this formulation, has been shown to provide prolonged circulation of vincristine in the blood).

Please see important safety information below and the full prescribing information for Marqibo at www.marqibo.com.

Indication and usage

Marqibo is a liposomal vinca alkaloid indicated for the treatment of adult patients with Philadelphia chromosome-negative (Ph-) acute lymphoblastic leukemia (ALL) in second or greater relapse or whose disease has progressed following two or more anti-leukemia therapies. This indication is based on overall response rate. Clinical benefit such as improvement in overall survival has not been verified.

Important safety information

CONTRAINDICATIONS

- Marqibo is contraindicated in patients with demyelinating conditions including Charcot-Marie-Tooth syndrome
- Marqibo is contraindicated in patients with hypersensitivity to vincristine sulfate or any of the other components of Marqibo (vinCRIStine sulfate LIPOSOME injection)
- Marqibo is contraindicated for intrathecal administration

WARNING

***See full prescribing information for complete boxed warning*.**

- **For Intravenous Use Only — Fatal if Given by Other Routes**
- **Death has occurred with intrathecal use**
- **Marqibo (vinCRIStine sulfate LIPOSOME injection) has different dosage recommendations than vinCRIStine sulfate injection. Verify drug name and dose prior to preparation and administration to avoid overdosage.**

Warnings and Precautions

For Intravenous Use Only

For Intravenous use only. Fatal if given by other routes.

Extravasation Tissue Injury

Only administer through a secure and free-flowing venous access line. If extravasation is suspected, discontinue infusion immediately and consider local treatment measures.

Neurologic Toxicity

Sensory and motor neuropathies are common and are cumulative. Monitor patients for symptoms of neuropathy, such as hypoesthesia, hyperesthesia, paresthesia, hyporeflexia, areflexia, neuralgia, jaw pain, decreased vibratory sense, cranial neuropathy, ileus, burning sensation, arthralgia, myalgia, muscle spasm, or weakness, both before and during treatment. Orthostatic hypotension may occur. The risk of neurologic toxicity is greater if Marqibo is administered to patients with preexisting neuromuscular disorders or when other drugs with risk of neurologic toxicity are being given. In the studies of relapsed and/or refractory adult ALL patients, Grade ≥ 3 neuropathy events occurred in 32.5% of patients. Worsening neuropathy requires dose delay, reduction, or discontinuation of Marqibo.

Myelosuppression

Monitor complete blood counts prior to each dose of Marqibo. If Grade 3 or 4 neutropenia, thrombocytopenia, or anemia develops, consider Marqibo dose modification or reduction as well as supportive care measures.

Tumor Lysis Syndrome

Tumor lysis syndrome (TLS) may occur in patients with ALL receiving Marqibo. Anticipate, monitor for, and manage.

Constipation and Bowel Obstruction

Ileus, bowel obstruction, and colonic pseudo-obstruction have occurred. Marqibo can cause constipation. Institute a prophylactic bowel regimen to mitigate potential constipation, bowel obstruction, and/or paralytic ileus, considering adequate dietary fiber intake, hydration, and routine use of stool softeners, such as docusate. Additional treatments, such as senna, bisacodyl, milk of magnesia, magnesium citrate, and lactulose may be considered.

Fatigue

Marqibo can cause severe fatigue. Marqibo dose delay, reduction, or discontinuation may be necessary.

Hepatic Toxicity

Fatal liver toxicity and elevated levels of aspartate aminotransferase have occurred. Elevated levels of aspartate aminotransferase of Grade ≥3 occurred in 6-11% of patients in clinical trials. Monitor hepatic function tests. Reduce or interrupt Marqibo for hepatic toxicity.

Embryofetal Toxicity

Marqibo can cause fetal harm when administered to a pregnant woman. Vincristine sulfate liposome injection was teratogenic or caused embryofetal death in animals. Women of childbearing potential should avoid becoming pregnant while being treated with Marqibo. There are no adequate and well-controlled studies of Marqibo in pregnant women and there were no reports of pregnancy in any of the clinical studies in the Marqibo clinical development program. If this drug is used during pregnancy, or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to a fetus *[see Use in Specific Populations].*

Adverse Reactions

The most common adverse reactions (> 30%) were constipation (57%), nausea (52%), pyrexia (43%), fatigue (41%), peripheral neuropathy (39%), febrile neutropenia (38%), diarrhea (37%), anemia (34%), decreased appetite (33%), and insomnia (32%).

The most commonly reported SAEs included febrile neutropenia (20.5%), pyrexia (13.3%), hypotension (7.2%), respiratory distress (6.0%), and cardiac arrest (6.0%).

Twenty-eight percent of patients experienced adverse reactions leading to treatment discontinuation. The most common adverse reactions that caused treatment discontinuation were peripheral neuropathy (10%), leukemia-related (7%), and tumor lysis syndrome (2%).

Deaths occurred in 23% of patients in study 1. The non-leukemia related causes of deaths were brain infarct (1), intracerebral hemorrhage (2), liver failure (1), multi-system organ failure (2), pneumonia and septic shock (3), respiratory failure (4), pulmonary hemorrhage (1), and sudden cardiac death (1).

Drug Interactions

No formal drug interaction studies have been conducted with Marqibo. Marqibo is expected to interact with drugs known to interact with non-liposomal vincristine sulfate.

Simultaneous oral or intravenous administration of phenytoin and antineoplastic chemotherapy combinations that included non-liposomal vincristine sulfate has been reported to reduce blood levels of phenytoin and to increase seizure activity.

CYP3A Interactions

Vincristine sulfate, the active agent in Marqibo, is a substrate for cytochrome P450 3A isozymes (CYP3A); therefore, the

concomitant use of strong CYP3A inhibitors should be avoided (e.g., ketoconazole, itraconazole, voriconazole, posaconazole, clarithromycin, atazanavir, indinavir, nefazodone, nelfinavir, ritonavir, saquinavir, telithromycin). Similarly, the concomitant use of strong CYP3A inducers should be avoided (e.g., dexamethasone, phenytoin, carbamazepine, rifampin, rifabutin, rifapentine, phenobarbital, St. John's Wort).

P-glycoprotein Interactions

Vincristine sulfate, the active agent in Marqibo, is also a substrate for P-glycoprotein (P-gp). The effect of concomitant use of potent P-gp inhibitors or inducers has not been investigated; it is likely that these agents will alter the pharmacokinetics or pharmacodynamics of Marqibo. Therefore the concomitant use of potent P-gp inhibitors or inducers should be avoided.

Use in Specific Populations

Pregnancy

Pregnancy Category D [*see Warnings and Precautions*]

Based on its mechanism of action and findings from animal studies, Marqibo can cause fetal harm when administered to pregnant women.

If this drug is used during pregnancy, or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to a fetus. In an embryofetal developmental study, pregnant rats were administered vincristine sulfate liposome injection intravenously during the period of organogenesis at vincristine sulfate doses of 0.022 to 0.09 mg/kg/day. Drug-related adverse effects included fetal malformations (skeletal and visceral), decreases in fetal weights, increased numbers of early resorptions and post-implantation losses, and decreased maternal body weights. Malformations were observed at doses ≥ 0.044 mg/kg/day in animals at systemic exposures approximately 20-40% of those reported in patients at the recommended dose.

Nursing Mothers

It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk and because of the potential for serious adverse reactions in nursing infants, a decision should be made whether to discontinue nursing or discontinue the drug, taking into account the importance of the drug to the mother.

Pediatric Use

The safety and effectiveness of Marqibo in pediatric patients have not been established.

Geriatric Use

Safety and effectiveness in elderly individuals have not been established. In general, dose selection for an elderly patient should be cautious, reflecting the greater frequency of decreased hepatic, renal, or cardiac function, and of concomitant disease or other drug therapy.

Renal Impairment

The influence of renal impairment on the safety, efficacy, and pharmacokinetics of Marqibo has not been evaluated.

Hepatic Impairment

Non-liposomal vincristine sulfate is excreted primarily by the liver. The influence of severe hepatic impairment on the safety and efficacy of Marqibo has not been evaluated. The pharmacokinetics of Marqibo was evaluated in patients with moderate hepatic dysfunction (Child-Pugh B) secondary to melanoma liver metastases. The dose-adjusted maximum plasma concentration (C_{max}) and area under the concentration-time curve (AUC) of Marqibo in patients with moderate hepatic impairment was comparable to the C_{max} and AUC of patients with ALL who had otherwise normal hepatic function.

About Beleodaq™

Beleodaq is a pan-HDAC inhibitor being studied in multiple clinical trials as a single agent or in combination with chemotherapeutic agents for the treatment of various hematological and solid cancers. Its anticancer effect is thought to be mediated through multiple mechanisms of action, including the inhibition of cell proliferation, induction of apoptosis (programmed

cell death), inhibition of angiogenesis, and the induction of differentiation. Beleodaq has been shown to have activity in tumors that had become resistant to anticancer agents such as the platinums, taxanes, and topoisomerase II inhibitors.

Forward-looking statement — This press release may contain forward-looking statements regarding future events and the future performance of Spectrum Pharmaceuticals that involve risks and uncertainties that could cause actual results to differ materially. These statements are based on management's current beliefs and expectations. These statements include, but are not limited to, statements that relate to our business and its future, including certain company milestones, Spectrum's ability to identify, acquire, develop and commercialize a broad and diverse pipeline of late-stage clinical and commercial products, leveraging the expertise of partners and employees around the world to assist us in the execution of our strategy, and any statements that relate to the intent, belief, plans or expectations of Spectrum or its management, or that are not a statement of historical fact. Risks that could cause actual results to differ include the possibility that our existing and new drug candidates may not prove safe or effective, the possibility that our existing and new applications to the FDA and other regulatory agencies may not receive approval in a timely manner or at all, the possibility that our existing and new drug candidates, if approved, may not be more effective, safer or more cost efficient than competing drugs, the possibility that our efforts to acquire or in-license and develop additional drug candidates may fail, our lack of sustained revenue history, our limited marketing experience, our dependence on third parties for clinical trials, manufacturing, distribution and quality control and other risks that are described in further detail in the Company's reports filed with the Securities and Exchange Commission. We do not plan to update any such forward-looking statements and expressly disclaim any duty to update the information contained in this press release except as required by law.

Spectrum Pharmaceuticals
Shiv Kapoor
Vice President, Strategic Planning & Investor Relations
702-835-6300
InvestorRelations@sppirx.com

Source: Spectrum Pharmaceuticals